7-10)

(a) For the bosons and for the distinguishables the ground state has all particles in the lowest state. For the fermions, each of the lowest 5 states has exactly one particle (ignoring spin).

(b) With one unit of energy for fermions the highest state particle goes into the next excited state. There is only one way to absorb that extra unit of energy.

For the distinguishables, any one of the particles can be in the first excited state so there are 5 distinct possibilities.

For bosons the same is true, but they're all the same so there really is only one possibility.

In the following, the ground state is $n=0$.

(c) For bosons, $(q=3)$ one boson can be in $n=3$, one in $n=2$ and one in $n=1$, or 3 in $n=1$. There are 3 possibilities.
If $q=2$, there can be two in $n=1$ (one way) or one in $n=2$ (one way).
For distinguishables, the same is true but the degeneracy due to combinatorics is as follows: (i) for $q=3$:

One in $n=3$ — 5 ways to do this.

One in $n=2$, one in $n=1$ — 2×10 ways to do this i.e., 20, because the order matters.

Three in $n=1$ — 10 ways to do this, i.e., $\binom{5}{2}$: the order of the 2 left in the ground state does not matter.

(ii) for $q=2$ we either have one in $n=2$ (5 ways) or two in $n=1$ (10 ways to do this).

For fermions:

(a) $q = 2$: Promote $n = 4$ to $n = 6$ or

$n = 3$ to $n = 5$

(2 ways in all)

(b) $q = 3$: Promote $n = 4$ to $n = 7$ or

$n = 3$ to $n = 6$ or

$n = 2$ to $n = 5$

(3 ways in all)

(d) We are not asked about fermions: only about bosons vs. distinguishable particles. The latter have higher degeneracy in the excited macrostates, so are less likely to be in the ground state than bosons.